

## Genome Assignment

1. Chromosome 5
- 2 & 3. 1700 genes and 180 million base pairs
4. CSA gene
5. It codes for proteins for transcriptional machinery
6. Has a range from 100 to 219. Has a length of 568, and is the CFTR gene
7. Functions as chloride channel and controls water secretion
8. Causes cystic fibrosis
9. Chromosome 7
10. I chose Gorillas
11. Also known as the Western Lowland gorillas
12. Not surprised because gorillas are very similar to humans and are closely related to humans
13.
  - a. Cebinae; Sapajus
  - b. Tufted capuchin
  - c. Yes, there is one gap
14. A maximal sequence of consecutive insertions or deletions (indels) of letters.
15. NM\_145556: TAR DNA binding protein, nucleic acid
16. NM\_013444: Nucleic acid and mRNA molecule
17. NM\_001010850: RNA molecule with its query length being 1977
18. KJ174530: Exon and partial cds nucleic acid
19. Parkinson's disease (15), dementia (16), amyotrophic lateral sclerosis type 6 (17), Leigh syndrome (18)
20. GenBank is a national genetic sequence database of publicly available nucleotide sequences and protein translations
21. (cDNA) Synthetic DNA that has been transcribed from a specific mRNA through a reaction using the enzyme reverse transcriptase.
22. Beta globin is the match
23. Yes, there are slight differences
24. On sequences 721, they don't line up perfectly
25. Yes, there is one gap in the sequences
26. The ACH gene

27. Encodes fibroblast growth receptor

28. Craniosynostosis

29. All are connected because they are related/are medical and genetic databases for medicine. NIH (National Institutes of Health), NLM ( US National Library of Medicine), NCBI (National Center of Biotechnology Information, HHS (US Department of Health and Human Services)

30. One positive is learning about genes. One negative is that I had to read the individual sequences.